

Proceedings of the 4th International Barcelona Conference on Higher Education**Vol. 1. Ethics and relevance of scientific knowledge: what knowledge for what society?**GUNI - Global University Network for Innovation – www.guni-rmies.net**The conformation, transition and consolidation of the ethos of successful research groups that cultivate the specialties of international relationships between North America and Mexico, immunochemistry and immunology****Mery Hamui Sutton**

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Abstract

The intention of this presentation is to propose as a hypothesis derived from the results obtained¹ from the analysis and comparison of successful scientific research with different specialties in the academy and public sector, that building knowledge in science depends on visions of what occurrences in a territory are and mean in a territory and in historic time, the manner in which problems are set forth, the logic upon which they are constructed and the possibility of treating the process of knowledge and its results with scientific rigor.

In this work were studied two research groups in health basic sciences (one with a specialty in immunochemistry and the other one in immunology) and in social

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sciences, another group with a specialty in international relationships between North America and Mexico. These groups are ascribed to the Universidad Nacional Autónoma de México.

The importance of considering the ethos as a space in different moments resides in that it allows knowing the group in situ and acceding to the research practice whose implications are manifested in the access to opportunities and power in the presence of challenges. To that end, it was necessary to understand the interaction and track the meaning of different types and patterns of relationships, commitments, collegiate and shared work, conflicts and the exercising of power in the social dynamic of the organizational structure of the groups' work. The productions of academic knowledge and the course of interaction have an influence on what characterizes a group and allows implementing strategies to achieve the ends.

The ethos constitutes an emotionally accepted order. It has an ideal model and creates logics that conditions scientific research. The ethos is contained in a structured framework formed by different ethos (scientific, institutional, environmental) and their logics allows interpretation of the experience and organization of actions by members of the group at different times during their trajectory. The ethos of the group is neither static nor immutable. It is permanently recreated and appears under new expressions. Change is what characterizes each of its movements.

In other words, there is an ideal in people's minds that orients the way they think they should be and the way they are. The "should be" works as an ideal parameter before the possible, it contrasts between the ideal model with being and acting, whether it is in reflection, actuation or the image that the colleagues in their group return to them. It confirms their identity and the way they ought to be and being as real.

The academic research practice implicated that cosmovision and social representations be construed that offered significance and meaning to research groups operating in collegiate processes to produce knowledge. In the basic health sciences groups studied with a specialty in immunochemistry and the social science group with a specialty in international relationships, socio-cognitive representations of what the groups are were processed, which made it possible for meanings to be

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reconstructed for its members and gave them social recognition in the environment.

The permanently recreated ethos was analytically characterized at three times: during the conformation of each group, the transition to consolidation, and consolidation, and at times its dissolution.

The three research groups studied were chosen because they had achieved a consolidated ethos, they cultivated different types of knowledge but could be compared because they belonged to the academy and public sector and were successful groups.

For this, the successful research group was taken as an analysis unit and considered a semi-open social system situated in an environment from which it emerges and has to be studied at the same time as the group is studied. It has a determined number of members who need an ordinary research problem to investigate. They have some type of financing and are registered for a prolonged period of time in a relatively continuous process of communication and interaction in which a boundary is delineated that restricts the type of interchange between integrants. The research group defines itself as such, its members develop a feeling of belonging and their existence is socially recognized. In order to attain the group's objective and the stabilization of group identity, a system of common norms and distribution of tasks according to a differentiation of specific roles is needed. The research group goes through an evolution process in the environment in which it is inserted.

The comparative analysis reveals similarities and differences in successful groups that cultivate different types of knowledge and shows that their integrants were congruent with the order, cosmovision and social representation between what was expected and what they did in spite of differences between groups with different specialties. The results obtained were contrasting in the groups' ethos through the following dimensions: the ethical way of being, the way to be and being, and the action with ethics in the furthering of specialties.

The awareness and ideas in the evolution of its building, as well as policies and economy were taken into account in order to analyze the building of knowledge in the disciplines under study. It was difficult to consolidate the ideas with the order of the

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facts, but it was important to make that effort because the research task done by the members of the academy was to offer rational arguments and constant guidance for the progress of knowledge.

The changes in events, concepts and topics analyzed allowed characterizing stages and the weight they have had on each field of knowledge studied and the behavior patterns of their scientists.

In order to explain changes in cosmovision in regard to knowledge, main ideas were taken up again that contributed to the way of thinking out problems at different times by making: a) a serious analysis of proposals arising from “social events” and understanding the link between both domains (time and events; b) principles were identified of orientation in the building of knowledge and margins of freedom in the research to feel security and protection in the organizational structure of the work of members of the academy and, c) interests were identified of the academic work when faced with a possible conflict of interests by the actors that needed results given by the research.

The following regularities stood out in the comparative ethos analysis in the trajectory of the groups: They found order in group values which resembled the order of discipline and sought to compete against other outside colleagues. They appreciated their achievements to make the task of investigating more efficient, tried to apply their findings, listened to their reflections to contribute to the specialty and valued being recognized.

The ethos, as an action, was shown in the academic production and construction of networks for both groups. Members of the groups had a higher formal prestige status of the institution, as well as in the disciplinary recognition and informal hierarchy of peers. Their relationships and the work accomplished allowed them to open way in the field of knowledge with the confidence of having tested themselves against colleagues from other groups and feeling they had the capacity to investigate with independence and freedom.

References in the presentation are: Ethos in the conformation of research groups, ethos in the transition to consolidation of research groups and ethos in the consolidation and dissolution of groups.

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In the analysis of topics for the discussion table about *Ethics and relevance of scientific knowledge: what knowledge for what society?* the contribution of this work lies in a theoretical conception that could help to build an *ethos* of the environment. It is in the *ethos* of the environment where material and symbolic space is offered, so scientists take on identity and make an everyday interchange relationship possible, it contributes to form patterns of interaction and find ways out within an order and with its own meaning linked to social wellbeing.

In this manner, it tries to contribute to the better understanding of how identities, patterns of interaction, values and abilities are made up in the formation of the academic scientist and how they can take on a decisive and fundamental role in the integration of research groups for the production of knowledge when faced with current challenges.

The theoretical proposition used to analyze the experience of the three successful and consolidated research groups that develop different type of knowledge situated in a public university in Mexico -one in social sciences with a specialty in international relationships between Mexico and North America and two in basic sciences with specialties in immunochemistry and immunology- is that successful research groups have typical behavior on each of the moments that were analytically distinguished: conformation, transition to consolidation and consolidation and possible dissolution.

Each moment was hypothetically delimited according to the variation of the *ethos* weight, the structure of the organization and the production rhythms in each of the three moments.

The hypothesis was fulfilled in the studied cases. The most relevant aspect in the conformation of groups was the construction of *ethos* elements that allowed the identification, and later, the organizational construction or rules that caused cohesion and allowed regulating and directing activities toward achieving results; and finally, production and aperture to increase the impact and relevance within networks that transcended the frontiers of the group itself.

To explain it in simple terms, it was necessary to reconstruct the dynamics of knowledge development and social outlines of scientists in each of the specialties and

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analyze the group members' experience to contrast them with the proposed theoretical models. The comparison showed that the norm of behavior, the type of knowledge they cultivated and the strategies for building knowledge directed the processes and the attaining of personal and group expectations.

The results obtained from the analysis and the comparison of these groups lead to new hypothesis. One was that knowledge construction depends on the visions of what events are and mean, in a territory and historic time, the way in which problems are proposed, the logic upon which they are built and the possibility of treating the process of knowledge and its results with scientific rigor.

In order to explain changes in the groups' *ethos* in regard to knowledge, a) main ideas were identified to understand the way of thinking out problems at different times b) serious analysis of proposals were made when arising from "social events" and hard work to understand the link between both domains, time and events; c) it was necessary to identify the principles that guide them when they were building knowledge and to be aware of the margins of error that made them feel secure and protected within the organizational structure of their research; d) finally, it required to identify vested interests in their academic work when faced with a possible conflict of interests with actors that needed results given by the research.

It was difficult to consolidate the ideas with the order of the facts, changes in events, concepts and topics but it allowed characterizing stages in the development of each specialty studied and the behavior patterns of their scientists.

According to Geertz, the *ethos* refers to an ideal, the building of a framework of values and attitudes that represent the group's tone, character, quality of life, moral and esthetic style as well as the formation of spirit (Geertz C, 1996:118), which allows negotiating and harmonizing diversity.

The importance of considering the *ethos* which varies along the group's development is that it allows knowing the group and their research practice whose theoretical implications explain the group's access to opportunities and power in the presence of challenges. The *ethos* of the group is neither static nor immutable. It is permanently recreated and appears under new expressions.

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The concept of *ethos* comes from the anthropology, it gives substance to the human imagination in terms of action and codification of what is socially desirable in values and patterns of behavior that make sense when decisions are taken.

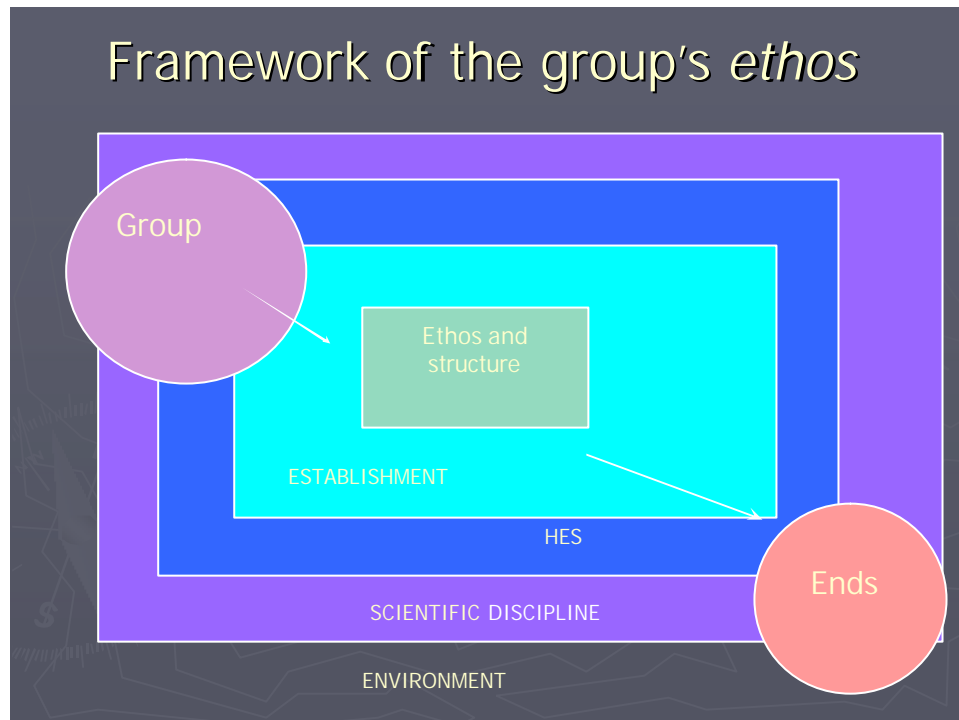
In this research, I presume that the *ethos* constitutes an emotionally accepted order. It has an ideal model and creates logic that conditions scientific investigation. In other words, there is an ideal in people's minds that illustrate the way they think they should be and the way they are. The "ought to be" works as an ideal parameter placed before of what is possible. The contrast between the ideal model with being and acting, whether it is in reflection, actions or the image that colleagues in their group return to them confirms that their identity and the way they ought to be and being are satisfactory.

I propose that from the different *ethos* making up their structuring framework, each group builds its own *ethos* and develops an organizational structure in accordance to the variety of possible actions and events integrating a stable manner of orienting research.

The *ethos* is contained in a structured framework formed by different *ethos*, the one of the institution contained in the higher education system, the scientific and environmental. The logic of each of the *ethos* allows interpretation of the experience and organization of actions by members of the group at different times during their trajectory.

The agreement among the different *ethos* perceived as independent spaces with a cosmovision, social representation and organization structure of their own, and when being present in researchers' common sense, makes the construction of a group *ethos* possible with joint pretensions that have validity through types of intersubjective recognition integrating values and attitudes.

The proposal is summarized in the next figure:



From the higher education institution *ethos* (the turquoise frame) comes the possibility of interacting face-to-face and on a daily basis, communicating with colleagues, having common patterns of interaction and group discussion.

From the scientific discipline *ethos*, (the purple frame) and the higher education system (the blue frame) members of the group accept their learning as valid and share them, convinced that symbols are interwoven in scientific research and academy organization through them.

From the environment *ethos*, (the gray frame) comes orientation, financing, power, recognition and prestige in the world and country.

In sum, the proposal is that group researchers abstract elements from each *ethos*, which they perceive as a "constellation" (Manheim, 1990) that contains a new constellation with a cosmovision, social representation and actions oriented to common research, that surpasses previous identities in the group *ethos*.

The Manheim constellation metaphor (1990:3) makes sense in this discussion table when we want to refer to the environment *ethos*, which is the one needed to show

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the role scientists should play to approach and to understand the knowledge that is developed. The image of the constellation of stars, based on a backdrop, and through which a position is designated to each star, establishes a reciprocal relationship between those stars situated in a moment of time and in a specific event, that could mean in a broader sense, the specific conjunction of factors in a moment of time. Its observation could become important if we believe that the simultaneous reunion of different factors codetermines the configuration of the concrete factor we are interested in.

This constellation (represented in the group's mauve circle) offers a base for understanding how its members grasp the world and the basic symbolic and material conditions that allow them to organize ordinary work through theoretical and methodological strategies (the square in the middle of the model) to reach the group's goals (pink circle).

Science is constructed, reconstructed and expressed in the disciplinary *ethos*, which at the same time, is made up of a backdrop, a cosmovision and social representation, it is on that backdrop where work is guarded and organized with their own meaning through the action and interaction of researchers.

Cosmo vision acts as the organizing principle for everyday life and as the regulating principle of the scientific group's events. Social representation is the image shared by researchers on the way things are in science, in the higher education institution to which they are assigned, in the field of knowledge that interests them and in the research problem that summons them.

According to Moscovici (1975), the group's social representation makes members feel part of the group, acquire a place and identity in regard to interaction and behavior formation processes within the order and the style that reigns in the group.

The comparative analysis of the three groups showed similarities and differences, but its members were congruent with the order, cosmovision and social representation between the environment and discipline *ethos* and what was expected on the group and what they did in their everyday actions, in spite of the differences in the type of knowledge of their specialties.

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With this communication I want to emphasize three ideas to deal with challenges when developing knowledge in this society and in these times.

Firstly, if research is oriented from the environment ethos, it can have an influence on the formation of identity values that are behind the practice of research in the higher education institutes, in groups and researchers.

Secondly, to endeavor the conformation of research groups to build knowledge in accordance to values that benefit society through their research work in the context of higher education institutions.

Lastly, think about changes that could have an influence on the practice of research, create networks to develop theories and methodologies for the production of knowledge from different frameworks.

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